

Application of Wisconsin Electric Power Company  
To Install Selective Catalytic Reduction Facilities and Associated Equipment on Edgewater Unit  
5 for Control of Nitrogen Oxide Emissions  
Docket No. 05-CE-137

**Data Request PSC 02.01**

**Request:**

02.01 Provide EGEAS analysis regarding the WEPCO share of the proposed Edgewater 5 project and how this fits into the overall expansion plan for the WEPCO generation fleet. This material may be supplemented with additional analysis showing any potential ratepayer benefits from selling power into the wholesale market. The analysis shall include NO<sub>x</sub>, SO<sub>2</sub>, and likely CO<sub>2</sub> allowance monetization based on the best available information.

**Response:**

The response to this question supplements the spreadsheet analysis performed in support of the Company's December 18, 2008 Supplemental Application (Application) for the project, and has been organized into two parts, as follows:

a). EGEAS analysis were performed for several of the scenarios described in the Application as summarized below. The EGEAS analyses are provided in the enclosed confidential CD. In performing these analyses, the Company used its updated load forecast and financial assumptions. Regarding monetization, the Company does not agree with the concept of monetizing residual air emissions as part of this analysis. Monetizing residual air emissions without clear actual economic value or cost is not appropriate. Notwithstanding that objection, the Company performed the EGEAS analysis with monetization for SO<sub>2</sub> and NO<sub>x</sub> residual emissions, along with carbon constraints.

The "delta" shown below for each of the scenarios represents the difference between the discounted revenue requirements associated with the control and retire alternatives:

- 1). The Base Case scenario control vs. retire benefit is projected at about \$290M, with the Resource Supply plans for the control and retire alternatives provided on Confidential Attachment 1, page 1.
- 2). The Carbon Constrained scenario control vs. retire benefit is projected at about \$66.3M, with the Resource Supply plans for both control and retire alternatives provided on Confidential Attachment 1, page 2.
- 3). A new scenario (Carbon constrained and emission monetization) was performed in response to this data request. The analysis employed February 27, 2009 vintage NO<sub>x</sub> and SO<sub>2</sub> cost projections from ICAP Energy. The control vs. retire benefit for this scenario is projected at about \$62M, with the Resource Supply plans for the control and retire alternatives provided on Confidential Attachment 1, page 3.

b). As part of performing these EGEAS analysis, the Company updated its input assumptions used in the spreadsheet analysis provided to support the supplemental filing. The results of the updated spreadsheet analysis are provided below.

	BASE	HIGH RETENTION VALUE	LOW RETENTION VALUE	CARBON CONSTRAINED FUTURE
	Delta (C/R)	Delta (C/R)	Delta (C/R)	Delta (C/R)
WE \$M	307.7	343.9	270.4	130.9

Notes:

C/R: Control vs. retire, with positive values showing value of adding emission controls.

WE costs shown are net present value revenue requirements discounted to 2008\$.

**Answered by:** Paul Schumacher

**Date:** March 12, 2009

**We Energies Resource Plan**  
**Edgewater 5 Control Base Assumptions**

Pkr	SCPC	AdvCoal	CC	Biomass	Wind	Solar	ST Pur
MW	MW	MW	MW	MW	MW	MW	MW

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**We Energies Resource Plan**  
**Edgewater 5 Retire Base Assumptions**

Pkr	SCPC	AdvCoal	CC	Biomass	Wind	Solar	ST Pur
MW	MW	MW	MW	MW	MW	MW	MW

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**We Energies Resource Plan****Edgewater 5 Control, Monetize CO2, -10% Coal and +10% Gas**

Pkr	SCPC	AdvCoal	CC	Biomass	Wind	Solar	ST Pur
MW	MW	MW	MW	MW	MW	MW	MW

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**We Energies Resource Plan****Edgewater 5 Control, Monetize CO2 SO2 and NOX, -10% Coal and +10% Gas**

Pkr	SCPC	AdvCoal	CC	Biomass	Wind	Solar	ST Pur
MW	MW	MW	MW	MW	MW	MW	MW

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**We Energies Resource Plan****Edgewater 5 Retire, Monetize CO2 SO2 and NOX, -10% Coal and +10% Gas**

Pkr	SCPC	AdvCoal	CC	Biomass	Wind	Solar	ST Pur
MW	MW	MW	MW	MW	MW	MW	MW

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